

CLAIMS

What is claimed is:

- 1 1. A method of distributing mail, comprising:
2 electronically transmitting a print job, and a list of postal addresses of
3 multiple recipients to which the print job is desired to be delivered, from a user's
4 location;
5 providing a printer in a postal delivery vehicle; and
6 printing out mail pieces from the print job, for at least some of the multiple
7 recipients, on the printer in the postal delivery vehicle.

- 1 2. A method of distributing mail in accordance with claim 1 wherein the
2 mail pieces are printed in an order at least partly corresponding to a delivery route for
3 the postal delivery vehicle.

- 1 3. A method of distributing mail in accordance with claim 2 and further
2 comprising routing the print job to respective postal facilities separate from the user's
3 location, the postal facilities being selected based on the postal addresses, providing
4 a wireless communication link between one of the postal facilities and the postal
5 delivery vehicle.

- 1 4. A method of distributing mail in accordance with claim 3 and further
2 comprising providing a computer in the postal delivery vehicle, coupled to the printer,
3 wherein the printer is in wireless communication with the postal facility via the
4 computer.

- 1 5. A method of distributing mail in accordance with claim 4 wherein the
2 computer is programmable with data describing the postal vehicle delivery route, and
3 wherein the printer prints out print jobs in the vehicle delivery route order based on
4 the programmed data.

- 1 6. A method of distributing mail in accordance with claim 4 wherein the
2 computer is programmable with data describing the postal vehicle delivery route using
3 a graphical user interface that displays a map that a user can interact with to program

4 the data, and wherein the printer prints out print jobs in the vehicle delivery route
5 order based on the programmed data.

1 7. A method of distributing mail in accordance with claim 3 wherein a
2 print job is printed just-in-time before the postal delivery vehicle arrives at an address
3 of an addressee.

1 8. A method of distributing mail in accordance with claim 4 and further
2 comprising supporting a GPS receiver from the postal delivery vehicle and coupling
3 the GPS receiver to the computer, wherein the computer is configured to determine
4 which of the addressees the postal vehicle is approaching, using the GPS receiver,
5 and to cause printing out of a print job for the addressee that the vehicle is
6 approaching.

1 9. A method of distributing mail in accordance with claim 3 wherein
2 some of the mail pieces are printed out at one of the postal facilities and loaded into
3 the vehicle at that postal facility, and other mail pieces are printed out in the postal
4 delivery vehicle.

1 10. A system for distributing mail, comprising:
2 a server configured to receive, from a user's client machine, an
3 electronically transmitted print job, and a list of postal addresses of multiple recipients
4 to which the print job is desired to be delivered, from a user's location;
5 a plurality of computers in respective postal facilities, at least selectively
6 coupled to the server, the server being configured to electronically route at least
7 portions of the print job to selected ones of the computers based, at least in part, on
8 proximity of the postal facilities to the respective recipients; and
9 a printer configured to be supported by a postal delivery vehicle associated
10 with one of the postal facilities, the printer being selectively wirelessly coupled to the
11 computer in the associated postal facility and configured to print out at least some
12 mail pieces from the print job that were electronically routed to the associated postal
13 facility.

1 11. A system for distributing mail in accordance with claim 10 wherein
2 the printer configured to be supported in the postal delivery vehicle is configured to
3 print in an order at least partly corresponding to a delivery route for the postal delivery
4 vehicle.

1 12. A system for distributing mail in accordance with claim 11 and
2 further comprising a computer coupled to the printer and configured to be supported
3 by the postal vehicle, wherein the printer is wirelessly coupled to the computer in the
4 postal facility via the computer configured to be supported by the postal delivery
5 vehicle.

1 13. A system for distributing mail in accordance with claim 12 wherein
2 the computer configured to be supported by the postal delivery vehicle is pre-
3 programmed with data describing the postal delivery vehicle delivery route and the
4 printer is configured to print out print jobs in the vehicle delivery route order based on
5 the pre-programmed data.

1 14. A system for distributing mail in accordance with claim 10 wherein a
2 print job is printed before the postal delivery vehicle arrives at an address of an
3 addressee.

1 15. A system of distributing mail in accordance with claim 12 and further
2 comprising a GPS receiver configured to be supported from the postal delivery
3 vehicle and coupled to the computer configured to be supported by the postal delivery
4 vehicle, wherein the computer configured to be supported by the postal delivery
5 vehicle is configured to determine which of the addressees the postal delivery vehicle
6 is approaching, using the GPS receiver, and to cause printing out of a print job for the
7 addressee that the postal delivery vehicle is approaching.

1 16. A system for distributing mail in accordance with claim 10 wherein
2 some of the mail pieces are printed out at one of the postal facilities and loaded into
3 the vehicle at that postal facility, and other mail pieces are printed out in the vehicle.

1 17. A system for distributing mail in accordance with claim 12 wherein
2 the computer defines a graphical user interface with which a user can specify the
3 delivery route by tracing a map on the graphical user interface.

1 18. A method of distributing mail, comprising:
2 electronically receiving a print job and a list of addresses of multiple
3 recipients to which the print job is desired to be delivered from a user's location, the
4 print job being mergable with respective addresses of the list to define multiple
5 separate individually addressed electronic mail pieces;
6 merging the print job with respective addresses of the list to define multiple
7 separate individually addressed electronic mail pieces;
8 electronically routing the individually addressed electronic mail pieces to
9 respective postal facilities separate from the first user's location, the postal facilities
10 being selected based on proximity to the addresses of the individually addressed
11 pieces;
12 electronically defining postal delivery routes for respective postal facilities;
13 and
14 at each postal facility for which an individually addressed electronic mail
15 piece has been received, printing out mail pieces for respective addressees in an
16 order corresponding to the defined delivery route.

1 19. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route comprises electronically receiving natural language
3 descriptions of a route in a computer and translating the natural language
4 descriptions to an addressee sort order for printing out of the mail pieces.

1 20. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route comprises electronically receiving natural language
3 descriptions of a route in a computer and translating the natural language
4 descriptions to an addressee sort order for printing out of the mail pieces, the natural
5 language descriptions including street names and indications of when and which way
6 to turn.

1 21. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route comprises electronically receiving natural language
3 descriptions of a route in a computer and translating the natural language
4 descriptions to an addressee sort order for printing out of the mail pieces, the natural
5 language description being capable of including street names and addresses,
6 indications of when and which way to turn, and an indication of whether mail is to be
7 delivered to all addresses on one side of a portion of a street or the other side or
8 alternating sides.

1 22. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route for a postal facility comprises defining a graphical user
3 interface configured to present a map having streets displayed thereon to an
4 operator, with which the operator can trace a pattern on the map to define a carrier
5 route, the method further comprising converting the traced pattern to a sequence of
6 addresses corresponding to the carrier route.

1 23. A method of distributing mail in accordance with claim 22 wherein
2 the graphical user interface is configured to display opposite sides of streets, and
3 wherein an operator can define a carrier route to a precision level in which sides of
4 streets can be specified.

1 24. A method of distributing mail in accordance with claim 22 wherein
2 the graphical user interface is configured to display opposite sides of streets, and
3 wherein an operator can define a carrier route to a precision level in which an order of
4 individual houses to be included can be specified.

1 25. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route comprises supporting a GPS unit from a postal delivery
3 vehicle, and tracking GPS locations of a postal delivery vehicle route.

1 26. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route comprises supporting a GPS unit from a postal delivery
3 vehicle, and tracking GPS locations of a postal delivery vehicle route in a set-up run,
4 and converting the GPS locations to postal addresses.

1 27. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route for a postal facility comprises defining a graphical user
3 interface configured to present a map having streets displayed thereon to an
4 operator, wherein the graphical user interface is configured to display icons
5 representing houses on opposite sides of streets, and wherein an operator can define
6 a carrier route by selecting housing using the graphical user interface.

1 28. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route for a postal facility comprises defining a graphical user
3 interface configured to present a map having streets displayed thereon to an
4 operator, wherein, in response to two adjacent houses being selected in a row on the
5 graphical user interface, a direction is automatically determined.

1 29. A method of distributing mail in accordance with claim 18 wherein
2 defining a delivery route for a postal facility comprises defining a graphical user
3 interface configured to present a map having streets displayed thereon to an
4 operator, wherein, in response to two adjacent houses being selected in a row on the
5 graphical user interface, a direction is automatically determined and the graphical
6 user interface displays icons representing houses at the next intersection and, in
7 response to selection of at least one of the icons at the intersection, determines a
8 direction for continuation of the carrier route.

1 30. A system for distributing mail, comprising:
2 a server configured to electronically receive a print job and a list of
3 addresses of multiple recipients to which the print job is desired to be delivered from a
4 user's client machine, the print job being mergable with respective addresses of the
5 list to define multiple separate individually addressed electronic mail pieces, the
6 server being further configured to merge the print job with respective addresses of the
7 list to define multiple separate individually addressed electronic mail pieces;

8 means for electronically routing the individually addressed electronic mail
9 pieces to respective postal facilities separate from the first user's location, the postal
10 facilities being selected based on proximity to the addresses of the individually
11 addressed pieces;
12 means for electronically defining postal delivery routes for respective postal
13 facilities; and
14 means for printing out mail pieces for respective addressees in an order
15 corresponding to the defined delivery route at each postal facility for which an
16 individually addressed electronic mail piece has been received.

1 31. A system for distributing mail in accordance with claim 30 wherein
2 the means for defining a delivery route comprises a computer configured to
3 electronically receive natural language descriptions of a route and to translate the
4 natural language descriptions to an addressee sort order for printing out of the mail
5 pieces.

1 32. A system for distributing mail in accordance with claim 30 wherein
2 the means for defining a delivery route comprises means for electronically receiving
3 natural language descriptions of a route and for translating the natural language
4 descriptions to an addressee sort order for printing out of the mail pieces, the natural
5 language descriptions including street names and indications of when and which way
6 to turn.

1 33. A system for distributing mail in accordance with claim 30 wherein
2 the means for defining a delivery route comprises means for electronically receiving
3 natural language descriptions of a route and for translating the natural language
4 descriptions to an addressee sort order for printing out of the mail pieces, the natural
5 language description being capable of including street names and addresses,
6 indications of when and which way to turn, and an indication of whether mail is to be
7 delivered to all addresses on one side of a portion of a street or the other side or
8 alternating sides.

1 34. A system for distributing mail in accordance with claim 30 wherein
2 the means for defining a delivery route for a postal facility comprises means for
3 defining a graphical user interface configured to present a map having streets
4 displayed thereon to an operator, with which the operator can trace a pattern on the
5 map to define a carrier route, and means for converting the traced pattern to a
6 sequence of addresses corresponding to the carrier route.

1 35. A system for distributing mail in accordance with claim 34 wherein
2 the means for defining a graphical user interface is configured to display opposite
3 sides of streets, and wherein an operator can define a carrier route to a precision
4 level in which sides of streets can be specified.

1 36. A system for distributing mail in accordance with claim 34 wherein
2 the graphical user interface is configured to display opposite sides of streets, and
3 wherein an operator can define a carrier route to a precision level in which an order of
4 individual houses to be included can be specified.

1 37. A system for distributing mail in accordance with claim 30 wherein
2 the means for defining a delivery route comprises a GPS receiver supported from a
3 postal delivery vehicle to track GPS locations of a postal delivery vehicle route.

1 38. A system for distributing mail in accordance with claim 30 wherein
2 the means for defining a delivery route for a postal facility comprises means for
3 defining a graphical user interface configured to present a map having streets
4 displayed thereon to an operator, wherein the graphical user interface means is
5 configured to display icons representing houses on opposite sides of streets, and
6 wherein an operator can define a carrier route by selecting housing using the
7 graphical user interface means.

1 39. A system for distributing mail in accordance with claim 30 wherein
2 the means for defining a delivery route for a postal facility comprises means for
3 defining a graphical user interface configured to present a map having streets
4 displayed thereon to an operator, and means for, in response to two adjacent houses

5 being selected in a row on the graphical user interface means, automatically
6 determining a direction.

1 40. A system for distributing mail in accordance with claim 30 wherein
2 the means for defining a delivery route for a postal facility comprises means for
3 defining a graphical user interface configured to present a map having streets
4 displayed thereon to an operator, wherein, in response to two adjacent houses being
5 selected in a row on the graphical user interface, a direction is automatically
6 determined and the graphical user interface means displays icons representing
7 houses at the next intersection and, in response to selection of at least one of the
8 icons at the intersection, determines a direction for continuation of the carrier route.

1 41. A method of distributing mail, comprising:
2 electronically transmitting a print job, and a list of postal addresses of
3 multiple recipients to which the print job is desired to be delivered, from a user's
4 location;
5 providing a printer in a postal delivery vehicle;
6 printing out mail pieces from the print job, for at least some of the multiple
7 recipients, on the printer in the postal delivery vehicle; and
8 delivering a mail piece to one of the multiple recipients after that recipient
9 has signed for the mail piece.

1 42. A method of distributing mail in accordance with claim 41 and
2 further comprising requiring an addressee to sign for a mail piece before it is printed
3 in the postal delivery vehicle.

1 43. A method of distributing mail in accordance with claim 41 and
2 further comprising providing a web site with which an addressee can sign for a mail
3 piece.

1 44. A method of distributing mail in accordance with claim 43 and
2 further comprising displaying an electronic version of a mail piece in response to the
3 addressee signing for the item of mail using the web site.

1 45. A method of distributing mail, comprising:

2 electronically receiving a print job and a list of addresses of multiple
3 recipients to which the print job is desired to be delivered, the addresses including
4 postal addresses and addresses representing groups defining multiple postal and
5 electronic addresses, the print job being mergable with respective addresses to
6 define multiple separate individually addressed electronic mail pieces;

7 determining if an address on the list of addresses represents a group
8 defining multiple postal and electronic addresses and, if so, exploding the group into
9 the multiple postal and electronic addresses;

10 merging the print job with respective postal addresses of the list to define
11 multiple separate individually addressed electronic mail pieces;

12 electronically routing the individually addressed electronic mail pieces from
13 the server to respective distribution centers separate from the first user's location, the
14 distribution centers being selected based on proximity to the addresses of the
15 individually addressed pieces; and

16 at each distribution center for which an individually addressed electronic
17 mail piece has been received, printing out mail pieces for respective addressees in an
18 order corresponding to a predetermined delivery route.

1 46. A method in accordance with claim 45 and further comprising
2 electronically distributing electronic mail pieces to the electronic addresses.

1 47. A method in accordance with claim 45 and further comprising
2 e-mailing electronic mail pieces to the electronic addresses.

1 48. A method in accordance with claim 45 wherein determining if an
2 address on the list of addresses represents a group comprises determining if that
3 address includes indicia indicating that a group is indicated.

49. A method in accordance with claim 45 wherein determining if an address on the list of addresses represents a group comprises determining if that address includes a fictitious city name designated as a name identifying that a group is intended.